

Electronic Mail Consultations in Pediatrics Across the World Wide Web: An 18 month experience

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Background. Beginning in November of 1994, the Children's Medical Center at the University of Virginia instituted a pilot program of providing electronic mail consultations in selected pediatric subspecialties. The purpose of this report is to describe our experiences with electronic mail consultations directed to the Division of Pediatric Gastroenterology and Nutrition during the past 18 months.

Methods. Simple electronic mail consultation forms were developed and installed on the web pages of the Children's Medical Center at the University of Virginia (<http://www.med.virginia.edu/docs/cmc>). A disclaimer was included at the top of each form concerning issues of confidentiality and security. The forms were comprised of four free-text fields and one multiple choice field. The four text fields were:

- (1) name and organizational affiliation
- (2) complete e-mail address
- (3) city and country of origin
- (4) consultation information

The multiple choice field was category of requestor and the available choices were (a) physician, (b) parent or guardian, and (c) other.

An electronic mail box was established for each participating subspecialty division and was accessible to all faculty members in that subspecialty. As a prerequisite for participation in this pilot project, participating faculty members agreed to review consultations on a daily basis and respond within 48 hours of receipt. This report examines only those consultations directed to the Division of Pediatric Gastroenterology and Nutrition.

All consultation replies included a copy of the original consultation request as well as a disclaimer to the effect that since the patient had not been physically examined and the entire history had not been obtained, the validity of the response might be limited. Consultees were also asked how they had found the consultation web pages.

No internal or external announcements or mailings were made to communicate the availability of this

service. Access to the site was not limited in any way.

Results. Between November 1, 1995 and February 28, 1997, the Division of Pediatric Gastroenterology at the Children's Medical Center of the University of Virginia received 430 electronic mail consultation requests. During this 17 month period, an average of 27 consultation requests was received each month with a standard deviation of 11 and a range of 14 to 54. 79% of the consultation requests came from parents or guardians, 14% of the requests came from physicians, and the remaining 7% of requests came from other health care professionals. 82% of the consultation requests originated within the United States and 18% originated from international sites. The most frequent international source of consultations was Canada, followed by the United Kingdom and Australia.

The type of information requested via electronic mail consultation fell into three general categories: (1) a specific question or questions about the cause of a child's symptoms and appropriate therapeutic interventions, (2) confirmation of diagnosis or recommended therapies (i.e. second opinion), and (3) generic information concerning a disorder or treatment.

Information was most frequently requested concerning infantile colic, gastroesophageal reflux in infants and children, infantile and childhood constipation, and chronic or recurrent abdominal pain in childhood.

Conclusions. The World-Wide-Web (WWW) has become a very popular means of disseminating medical information to both health care professionals and the lay public. Our experiences with electronic mail consultation suggest that electronic communications may provide a means for parents and guardians as well as health care professionals to obtain patient and disease specific information from selected consultants in a timely manner. The large number of consultation requests we received from parents and guardians suggests that the information needs of families are not always met by primary health care providers. Moreover, many parents appear to be very comfortable seeking medical information from relatively anonymous "electronic consultants".